

REMARKS

Applicants appreciate the consideration of the present application afforded by the Examiner. Claims 1-13 and 17-39 were pending prior to the Office Action. Claims 38 and 39 have been canceled through this Reply. Therefore, claims 1-13 and 17-37 are pending. Claims 1 and 20 are independent. Favorable reconsideration and allowance of the present application are respectfully requested in view of the following remarks.

Allowable Subject Matter

Applicants appreciate that claims 19, 21, 22, and 28-30 are indicated to define allowable subject matter.

Interview Summary

Applicants thank the Examiner for the interview conducted on May 10, 2007, in which Applicants discussed with the Examiner and his supervisor the differences between “angular velocity” as discussed by the Morofuji reference and “vibration speed” as claimed in the present invention. Although specific agreement with respect to the claims was not reached, Applicants appreciate the Examiner’s suggestion that more specific language be introduced regarding the correction of an unwanted component of the vibration speed.

35 U.S.C. § 112, 1st Paragraph Rejection

Claims 38 and 39 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. Claims 38 and 39 have been canceled through this reply, rendering the rejection of claims 38 and 39 moot.

35 U.S.C. § 112, 2nd Paragraph Rejection

Claims 26 and 34 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite.

Through this reply, Applicants have amended claims 26 and 34 to recite the limitation “wherein the portion is less than the full compensating driving signal at a

beginning of the predetermined period”, as suggested by the Examiner in the Office Action. Applicants respectfully request that the §112, second paragraph rejection of claims 26 and 34 be withdrawn.

Claim Rejections - 35 U.S.C. §102

Claims 20, 31, and 37 stand rejected under 35 U.S.C. §102(b) as allegedly being anticipated by 5,794,078 to Okazaki (“Okazaki”). Applicants submit the Examiner has failed to establish a *prima facie* case of anticipation and traverse the rejection.

In order to establish a *prima facie* case of anticipation under 35 U.S.C. §102, the cited reference must teach or suggest each and every element in the claims. *See M.P.E.P. §2131; M.P.E.P. §706.02*. Accordingly, if the cited reference fails to teach or suggest one or more claimed elements, the rejection is improper and must be withdrawn.

Independent claim 20 recites, *inter alia*, the feature of “a correcting device that corrects the twice-integrated value calculated by the integrating device to substantially zero when the acceleration value determined by the vibration acceleration determining device is substantially zero such that an unwanted component of the vibration speed is substantially eliminated during image blur prevention”.

In the Office Action, the Examiner contends that Okazaki discloses the correcting device as described in independent claim 20, citing col. 15, lines 17-34. However, this citation of Okazaki expressly states “...if the acceleration is not detected... it is impossible to make the calculations for obtaining the velocity and the displacements thereafter. Hence, the control is carried out so as not to correct the image shake” (emphasis added). This merely indicates that in Okazaki the image shake correction is not performed in the absence of acceleration. There is no disclosure in Okazaki of a correction device that corrects the twice-integrated value calculated by the integrating device to substantially zero when the acceleration value is substantially zero. As can be appreciated by one of ordinary skill in the art, simply not performing the image shake correction is not comparable to active correction of the twice-integrated value such that an unwanted component of the vibration speed is substantially eliminated during image blur prevention.

Therefore, at least because Okazaki fails to teach or suggest each and every claimed element, independent claim 20 is distinguishable from the prior art. Claims 31 and 37 depend from claim 20, directly or indirectly. Therefore, for at least the reasons stated with respect to claim 20, claims 31 and 37 are also distinguishable from Okazaki.

Accordingly, Applicant respectfully requests that the rejection of claims 20, 31, and 37 under 35 U.S.C. § 102(b) be withdrawn.

Claim Rejections - 35 U.S.C. §103(a)

Claims 1, 17, 23, and 36 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,208,377 to Morofuji et al. ("Morofuji") in view of U.S. Patent No. 6,630,950 to Okawara et al. ("Okawara"). Claims 2-5, 10-13, 24, 26, and 27 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Morofuji in view of Okawara and further in view of U.S. Patent No. 6,332,060 to Miyamoto et al. ("Miyamoto"). Claims 6, 7, 9, and 25 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Morofuji in view of Okawara and further in view of U.S. Patent No. 5,617,177 to Imafuji et al. ("Imafuji"). Claim 8 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Morofuji in view of Okawara and further in view of Miyamoto and Imafuji. Claim 18 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Morofuji in view of Okawara and further in view of U.S. Patent No. 5,717,611 to Terui et al. ("Terui").

As applied to the amended claims, Applicants submit the Examiner has failed to establish a *prima facie* case of obviousness and traverse the rejection.

For a 35 U.S.C. § 103 rejection to be proper, a *prima facie* case of obviousness must be established. See *M.P.E.P.* 2142. One requirement to establish *prima facie* case of obviousness is that the prior art references, when combined, must teach or suggest all claim limitations. See *M.P.E.P.* 2142; *M.P.E.P.* 706.02(j). Thus, if the cited references fail to teach or suggest one or more elements, then the rejection is improper and must be withdrawn.

As amended, independent claim 1 recites, *inter alia*, the features of "a correcting device that corrects the integrated value calculated by the integrating device to

substantially zero when the differentiated value calculated by the differentiating device is substantially zero such that an unwanted component of the vibration speed is substantially eliminated during image blur prevention".

In the Office Action, the Examiner concedes that "the Morofuji device lacks a differentiating device that differentiates the speed determined by the vibration speed determining device and a correcting device that corrects the integrated value calculated by the integrating device to substantially zero when the differentiated value calculated by the differentiating device is substantially zero." *See Office Action, page 8, last paragraph.* To cure this conceded deficiency, the Examiner relies on the Ohkawara reference, which allegedly teaches differentiating a velocity signal to determine acceleration in order to detect pan or tilt (*see Ohkawara, col. 28, lines 5-15*).

The Examiner does not, and indeed cannot, rely on Ohkawara to teach "a correcting device that corrects the integrated value calculated by the integrating device to substantially zero when the differentiated value calculated by the differentiating device is substantially zero". The Examiner contends that "Morofuji teaches that when the device is panning or tilting, i.e. constant velocity and acceleration, that the correction value is corrected to zero" [*Office Action, page 9, lines 9-10*]. Applicants respectfully submit that there is no such teaching in the Morofuji reference.

Morofuji states:

"The panning/tilting decision circuit 312 operates in the following manner. The panning/tilting decision circuit receives an angular-velocity signal (indicative of the presence or absence of a vibration) outputted from the A/D converter 304 and an angular-displacement signal outputted from the [integrator 308]. If the angular velocity is constant and the angular-displacement signal obtained by integrating the angular-velocity signal shows a monotonous increase, the panning/tilting detection circuit 312 determines that panning or tilting has occurred. In this case, the panning/tilting detection circuit 312 shifts the low-frequency cut-off frequency of the HPF 310 toward a higher-frequency side, thereby altering

the characteristics of the HPF 310 to prevent the image-signal correcting system from responding to a vibration of low frequency.

If panning or tilting is detected, the VAP is progressively centered toward the center of its moving range. During this time as well, detection of the angular-velocity signal and the angular-displacement signal is continued, and when the panning or tilting comes to an end, the operation of lowering the low-frequency cut-off frequency of the HPF 310 and extending an image-shake correction range is performed.”

[Morofuji, col. 23, lines 37-43, emphasis added]

The only relevant passage of Morofuji which the Examiner could possibly rely upon to allegedly teach this feature of the present invention is the section underlined above. Applicants submit that this passage fails to describe a correcting device as claimed at least for the following reasons.

In his arguments presented in the Office Action, the Examiner contends that, in Morofuji, “image-shake control is not considered to be performed during panning/tilting because the optical system is centered until pan/tilt has ended” [Office Action, page 3, lines 11-13]. This is a misinterpretation of the passage from Morofuji outlined above. To clarify, Morofuji is expressly directed to the detection of pan/tilt such that the low-frequency components of pan/tilt present in the angular velocity signal can be removed from the signal prior to correction for image shake by the VAP. The express intent of the Morofuji device is to “provide an image-shake correcting device capable of realizing sufficient image-shake correction characteristics at all times under any condition” (col. 3, lines 30-34, emphasis added) and to make it “possible to optimumly set the control characteristics of a vibration detecting system and an image-shake correcting system during panning or tilting” (col. 4, lines 7-10, emphasis added). *See also col. 34, lines 6-42.* Clearly image correction is still being performed during pan/tilt, and the VAP is not statically centered.

First, Applicants submit that the passage, “If panning or tilting is detected, the VAP is progressively centered toward the center of its moving range” is merely

descriptive of the resultant motion afforded the VAP dictated by the effect of limiting the HPF to only passing high-frequency components of the signal. If pan/tilt detection were not implemented (i.e., the HPF allowed to pass low-freq. components), the system would attempt to correct for the low-frequency movement (sustained, constant movement) of the camera and the VAP would consequently be driven to the limits of its operational movement range (i.e., the limits of the drive device driving the VAP). When the low-frequency components of the signal are removed prior to image-shake correction, the result is that the correction device does not attempt to correct for the low-frequency motion; thus, the VAP is not driven toward the edge of its functional movement range. Instead, it is *progressively centered toward the center of its moving range*, as described by the aforementioned passage. This movement is a passive result of the limiting effect of the HPF and does not indicate a “correcting device that corrects the integrated value calculated by the integrating device to substantially zero when the differentiated value calculated by the differentiating device is substantially zero”, as recited in independent claim 1.

Second, even if Morofuji, *arguendo*, were to teach a “correcting device” which causes the VAP to be progressively centered toward the center of its moving range, which Applicants do not concede, Morofuji would still not teach that such a correcting device “corrects the integrated value calculated by the integrating device to substantially zero when the differentiated value calculated by the differentiating device is substantially zero” as claimed. At best, such a correcting device could only be said to *progressively center* the VAP *toward the center* of its moving range. This is not the same as correcting an integrated value to substantially zero. There is no teaching or suggestion in Morofuji that the VAP is ever actually centered within its moving range.

Finally, even if Morofuji in view of Ohkawara, *arguendo*, were to somehow teach all of the aforementioned limitations, which Applicants do not concede, Morofuji in view of Ohkawara still cannot teach a correcting device that corrects the integrated value calculated by the integrating device to substantially zero when the differentiated value calculated by the differentiating device is substantially zero such that an unwanted

component of the vibration speed is substantially eliminated during image blur prevention, as recited in amended claim 1.

In this instance, the combination of Morofuji and Ohkawara fails to teach or suggest each and every limitation of claim 1. As demonstrated above, Morofuji in view of Ohkawara fails to teach or suggest “a correcting device that corrects the integrated value calculated by the integrating device to substantially zero when the differentiated value calculated by the differentiating device is substantially zero such that an unwanted component of the vibration speed is substantially eliminated during image blur prevention” as recited in claim 1. Miyamoto, Imafuji, and Terui have not been, and indeed cannot be, relied upon to correct at least this deficiency of Morofuji and Ohkawara. Therefore, for at least the reasons stated with respect to claim 1, the claims dependent upon claim 1 are also distinguishable from any combination of Morofuji, Ohkawara, Miyamoto, Imafuji, and Terui.

Accordingly, Applicants respectfully request that the rejection of claims 1-13, 17, 18, 23-27, and 36 under §103(a) be withdrawn.

Claims 32, and 34-35 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Okazaki in view of Miyamoto. Claim 33 stands rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Okazaki in view of Imafuji. Applicants respectfully traverse.

As demonstrated above, Okazaki fails to teach or suggest each and every claimed element of independent claim 20, specifically “a correcting device that corrects the twice-integrated value calculated by the integrating device to substantially zero when the acceleration value determined by the vibration acceleration determining device is substantially zero such that an unwanted component of the vibration speed is substantially eliminated during image blur prevention”. Miyamoto and Imafuji have not been, and indeed cannot be, relied upon to teach at least this deficiency of Okazaki. Accordingly, claims 32-35 are distinguishable from the prior art and Applicants respectfully request that the § 103(a) rejection of claims 32-35 be withdrawn.

CONCLUSION

All objections and rejections raised in the Office Action having been addressed, it is respectfully submitted that the present application is in condition for allowance. Notice of same is earnestly solicited.

Should there be any outstanding matters that need to be resolved, the Examiner is respectfully requested to contact John R. Sanders (Reg. No. 60,166), to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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